

**REMARKS**

In the final Office Action, claims 1-27, 40, 41, 58-60, 70, 71, 78-84, 86-88, 90-95, and 109-115 are allowed. Claims 69, 85, 98, and 116-121 are rejected on new matter grounds. The Examiner made the rejections final. Upon our Reply to the Final Office Action on December 10, 2001, the Examiner issued an Advisory Action dated December 10, 2001, stating that upon filing an Appeal, he would allow claims 1-27, 40, 41, 58-60, 69-71, 78-88, 90-95, 98, 109-115. The Examiner maintained his rejections of claims 116-121.

Applicants hereby amend claims 69, 85 and 98 to incorporate the changes previously made but not entered by the Examiner. Applicants hereby amend claims 69 and 98 to change the objected-to "bromide or chloride or their combination" to the suggested "alkyl triethylammonium chloride or bromide surfactants with different chain lengths." As the Examiner points out, such is supported in the original specification at column 7, lines 45-52. Also as suggested, applicants hereby amend claim 85 to add the limitation "acid" to the recited catalyst.

Applicants hereby amend rejected claims 116-121 in formal part to overcome a prior indefiniteness rejection by changing their form from "An improved method..." to "A method...", a change earlier made but also not entered by the Examiner. Applicants also hereby amend claim 121 to correct a previously overlooked typographical error. Applicants add new claims 122-127, which are corresponding dependent claims containing the 'aqueous solvent' limitation formerly made to claims 116-121 but not entered. Finally, applicants hereby add new claim 128, which is proposed reissue claim 31 as it was finally amended before applicants cancelled it, without prejudice, in an attempt to advance the present reissue application.

For all the reasons of record, applicants submit that all pending claims, upon entry of the attached amendments, are patentable.

Applicants submit that entry of this amendment after final at the very least places the reissue application in better form for appeal. Accordingly, applicants request immediate issuance either of a Notice of Allowance or of an Advisory Action continuing the final rejection of claims 116-121 and new claims 122-128. At the very least, Applicants request entry of this amendment upon the filing of a Notice of Appeal.

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the Claims**

69. (Thrice Amended) The process of claim 58, wherein the ammonium cationic surfactant further includes [bromide or chloride or their combination] alkyl triethylammonium chloride or bromide surfactants with different chain lengths.

85. (Amended) A process to form a mesostructure, comprising:

- (a) preparing a precursor sol containing a soluble source of silica, water and alcohol solvent, an ammonium cationic surfactant and an acid catalyst; and
- (b) evaporating said solvent in less than 5 minutes to cause the formation of a mesostructure, wherein said mesostructure contains surfactant.

98. (Amended) The process of claim 91, wherein the ammonium cationic surfactant further includes [bromide or chloride or their combination] alkyl triethylammonium chloride or bromide surfactants with different chain lengths.

116. (Amended) A[n improved] method of forming templated mesoporous material on a substrate from a silica precursor solution containing an alkoxide silica precursor, and ammonium cationic surfactant and a solvent, while avoiding gelation, precipitation and non-porous or lamellar structures, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) dispensing a layer of said precursor solution on said substrate;
- (c) thinning said layer by spin casting; and
- (d) forming templated mesoporous material on said substrate by evaporation of the solvent in less than 5 minutes.

117. (Amended) A[n improved] method of forming templated mesoporous material from a silica precursor solution containing an alkoxide silica precursor, an ammonium cationic surfactant and a solvent, while avoiding gelation or precipitation or non-porous or lamellar structures, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) spin casting, drawing, spraying or squeegeeing said silica precursor solution; and
- (c) evaporating the solvent in less than 5 minutes to form templated mesoporous material.

118. (Amended) A[n improved] method of forming templated mesoporous material on a substrate from a silica precursor solution containing an alkoxide silica precursor, an amount of surfactant great enough to avoid a non-porous film but not enough to produce a lamellar structure, and a solvent, while avoiding gelation or precipitation, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) dispensing a layer of said precursor solution on said substrate;
- (c) thinning said layer by spin casting; and
- (d) forming templated mesoporous material on said substrate by evaporation of the solvent in less than 5 minutes.

119. (Amended) A[n improved] method of forming templated mesoporous material from a silica precursor solution containing an alkoxide silica precursor, a surfactant and a solvent, while avoiding gelation or precipitation and non-porous or lamellar structures, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) spin casting, drawing, spraying or squeegeeing said silica precursor solution; and
- (c) evaporating the solvent in less than 5 minutes to form templated mesoporous material.

120. (Amended) A[n improved] method of forming templated mesoporous material on a substrate from a silica precursor solution containing an alkoxide silica precursor, and a solvent, while avoiding gelation or precipitation [an] and non-porous or lamellar structures, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) dispensing a layer of said precursor solution on said substrate;
- (c) thinning said layer by spin casting; and
- (d) forming templated mesoporous material on said substrate by evaporation of the solvent in less than 5 minutes.

121. (Amended) A[n improved] method of forming templated mesoporous material from a silica precursor solution containing an alkoxide silica precursor, and a solvent, while avoiding gelation or precipitation and non-porous or [lemallar] lamellar structures, wherein the improvement comprises the steps of:

- (a) preparing said silica precursor solution using a solvent;
- (b) spin casting, drawing, spraying or squeegeeing said silica precursor solution; and
- (c) evaporating the solvent in less than 5 minutes to form templated mesoporous material.

Claims 122-128 are new.



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